



# University of Hawaii at Manoa

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## SB 561 RELATING TO THE REMOVAL OF SAND

Statement for  
Senate Committee on  
Ecology, Environment and Recreation  
Public Hearing - 24 February 1981

By  
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Hawaii Revised Statutes, Section 205-33(a) prohibits with certain exceptions the commercial removal of sand and related beach compositions within the shoreline area or within 1000 feet seaward of it or in ocean water of 30 or less feet in depth. SB 561 would amend this section to permit the mining or taking of sand and other marine deposits for: (1) reasonable, personal, non-commercial use, or (2) for the replenishment of sand on public beaches by the State or a county. In the latter case there is the additional requirement that an Environmental Impact Statement be filed pursuant to Chapter 343.

Doak Cox, Director of the Environmental Center who has worked on the sand mining legislation for several years is out of the State on sabbatical, hence is unavailable to present our testimony on SB 561. In the preparation of this statement we have included pertinent comments from earlier statements prepared by Dr. Cox, as well as comments from Paul Bartram, a former researcher with the University of Hawaii Environmental Center who has continued to work closely with Dr. Cox on this subject. The statement on this bill does not represent an institutional position of the University of Hawaii.

SB 561 permits the use of offshore sand deposits to be used for replenishment of eroding beaches. Although "structural" measures, such as groins and seawalls, are occasionally effective in stemming beach erosion, construction of such shore protection structures often results in loss of sand from nearby beaches or even from the beach intended for protection. "Non-structural" solutions to beach erosion, such as sand replenishment, are needed.

Large-scale replenishment of eroding beaches requires a volume of sand which is prohibitively expensive if obtained from a commercial quarry source, and few quarries can supply sand of the quality needed for beach replenishment. An effective method of sand recovery from offshore deposits has been developed and tested in Hawaii. Sand obtained by this method, which is known as the Submarine Sand Recovery System, is about 1/3 the cost of sand obtained from quarry sources. If reasonable precautions are taken in locating mining operations, offshore sand recovery is the most environmentally sound method of replenishing beach sand. Previous experimental tests by the University of Hawaii Department of Ocean Engineering, as provided for in the existing statutes (HRS 205-33), have shown that this sand recovery method minimizes water turbidity and environmental impacts associated with dredging.

Beaches are not affected by offshore sand removal when such removal is beyond the depths from which waves can move sand onshore. SB 561 permits sand removal from shallow waters for purposes of beach replenishment but adequately protects beach systems through the requirement of an environmental impact statement. Such an EIS should include evidence that shallow-water sand deposits designated for mining are not part of any littoral cell or active beach system. Shallow-water sand deposits which do not contribute to beach systems, as well as deepwater deposits, can be put to use in rebuilding beaches at lower cost than other sand sources and without environmental degradation.

The importance of Hawaii's beaches to our local residents as well as tourist industry needs little acknowledgement here. The use of offshore sand deposits for beach replenishment as provided by SB 561 would provide for an environmentally and economically sound natural resource recycling program.